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(71) Applicant: **SECURITY ENHANCEMENT SYSTEMS, LLC** [US/US]; 3176 MacArthur Boulevard, Northbrook, IL 60062 (US).

(72) Inventors: **UFKES, Philip, J.**; 3024 Jasper Boulevard, Sullivan's Island, SC 29482 (US). **TRAPANI, Matthew, Frank**; 931 Oxford Road, Deerfield, IL 60015 (US). **PAUL, Matthew**; 1045 East Kitson Drive, Palatine, IL 60074 (US). **CORNELIUS, Zachary, A.**; 3176 MacArthur Blvd, Northbrook, IL 60062 (US).

(74) Agent: **FINCH, Gregory**; Finch Paolino, LLC, 91 Rutledge Avenue, Charleston, SC 29401 (US).

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(54) Title: SYSTEM AND METHOD FOR ELECTRONIC ACCESS CONTROL IN MESH NETWORKED SITES

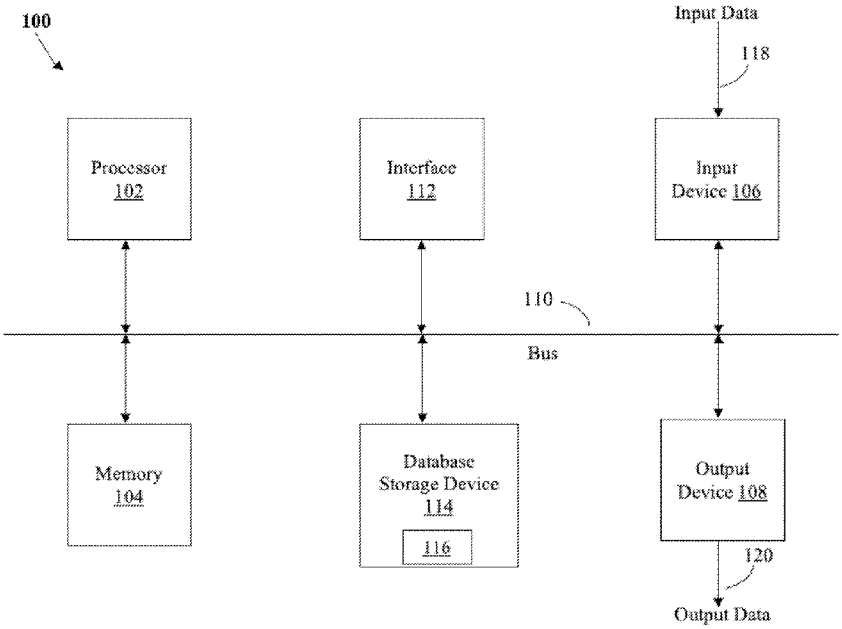

FIG. 1

(57) Abstract: A mesh networked site process management system and method that provides for enforcement of a predefined access methodology by utilizing mesh networking through all possible touchpoints within a site perimeter and compound. Certain embodiments of the present disclosure comprise various computerized components communicably connected via a highly secured mesh network, in which only approved devices are able to participate on a machine-to- machine basis. The network may allow each device to coordinate its activity state with all other devices in the network. If a user desires to interact with one or more devices in the network, then the user must follow agreed upon process steps in order to do so. The user interacts with each network authorized device via a separate communication outside of the highly secured mesh network in order to transfer data to and from each network authorized device for the purposes of electronic access control.

[Continued on next page]

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INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

IPC - INV. G07C 9/20; G07C 9/28; H04W 84/18 (2023.01)
ADD. G08B 13/00 (2023.01)

CPC - INV. G07C 9/00174; G07C 9/20; G07C 9/28; H04W 84/18
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
See Search History document

Electronic database consulted during the international search (name of database and, where practicable, search terms used)
See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 9,666,000 B1 (LATCHABLE INC.) 30 May 2017; figure 4, cols. 4-9, cols. 11-18	1-19
Y	US 2020/0358471 A9 (SECUREALL CORPORATION) 12 November 2020; paragraphs [0062], [0072], [0176], [0220], [0306]-[0311]	1-19
Y	US 2019/0371096 A1 (SENTRILOCK LLC) 05 December 2019; figures 7, 11, 12, paragraphs [0124]-[0128], [0146], [0151]-[0153], [0157]-[0158]	4, 13, 14
A	US 2020/0053096 A1 (CYBERARK SOFTWARE LTD.) 13 February 2020; Entire Document	1-19

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"D" document cited by the applicant in the international application
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300	Authorized officer Shane Thomas Telephone No. PCT Helpdesk: 571-272-4300

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US22/48018

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
-***-Please See Supplemental Page-***-

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-19

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US22/48018

-***-Continued From Box No. III: Observations where unity of invention is lacking-***-

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1-19 are directed towards an electronic access control method comprising assigning tasks.

Group II: Claim 20 is directed towards an electronic access control method using an identifier of an electronic device.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical features of Group I include at least receiving, with at least one server communicably engaged with the perimeter access point device, an acceptance of the one or more assigned task or state changes from the plurality of electronic access control devices, wherein the plurality of electronic access control devices are communicably engaged with the at least one server in the mesh network; updating, with the at least one server, one or more alarm system parameters in response to the one or more assigned task or state changes; and granting, with the at least one server, perimeter access to the user of the mobile electronic device at the perimeter access point device, which are not present in Group II.

The special technical features of Group II include at least wherein the electronic access credential comprises an identifier for the mobile electronic device, wherein the first electronic access control device is configured to store the identifier for the mobile electronic device; configuring, with the first electronic access control device via the mesh network, a temporary access authorization for a specified electronic access control device in the plurality of electronic access control devices, wherein the first electronic access control device is configured to communicate the identifier for the mobile electronic device to the specified electronic access control device via the mesh network, wherein the specified electronic access control device is configured to store the identifier for the mobile electronic device; receiving, with the specified electronic access control device, a wireless signal from the mobile electronic device, wherein the wireless signal comprises the identifier for the mobile electronic device; and granting access to the specified electronic access control device according to the temporary access authorization, which are not present in Group I.

The common technical features shared by Groups I-II are An electronic access control method, comprising: establishing, with a mobile electronic device, a wireless data transfer interface between the mobile electronic device and a first electronic access control device in a plurality of electronic access control devices, wherein the plurality of electronic access control devices are communicably engaged in a mesh network, wherein the first electronic access control device comprises a perimeter access device for a secured location; receiving, with the first electronic access control device, an electronic access credential for accessing the first electronic access control device from the mobile electronic device, processing, with the first electronic access control device, the electronic access credential, wherein the first electronic access control device is configured to grant access to a user of the mobile electronic device in response to authenticating the electronic access credential; and granting access to the specified electronic access control device.

However, these common features are previously disclosed by US 2020/0053096 A1 to CYBERARK SOFTWARE LTD. (hereinafter "CYBERARK").

CYBERARK discloses an electronic access control method (controlling access to restricted target resources including physical spaces; paras [0064], [0067]), comprising: establishing, with a mobile electronic device, a wireless data transfer interface between the mobile electronic device and a first electronic access control device in a plurality of electronic access control devices (a user of a client computing device 701 transmits a communication via communications interface to security perimeter device 703 of a plurality of security perimeter devices 703; fig 7; paras [0079], [0116]), wherein the plurality of electronic access control devices are communicably engaged in a mesh network (the security perimeters devices communicate through a mesh network; figs 1, 7; paras [0063], [0065]), wherein the first electronic access control device comprises a perimeter access device for a secured location (the security perimeter device controls access to an access-restricted building (secured location); para [0116]); receiving, with the first electronic access control device, an electronic access credential for accessing the first electronic access control device from the mobile electronic device (receiving, from the client computing device, a biometric identification (access credential) for access to the security perimeter device; paras [0093], [0116]), processing, with the first electronic access control device, the electronic access credential (the security perimeter device compares the biometric information with stored reference information (processing); para [0093]), wherein the first electronic access control device is configured to grant access to a user of the mobile electronic device in response to authenticating the electronic access credential (the security perimeter device denies or permits (configured to grant) access to the user based on the biometric authentication; paras [0093], [0116], [0118]); and granting access to the specified electronic access control device (permitting user access beyond the security perimeter; para [0118]).

Since the common technical features are previously disclosed by the CYBERARK reference, these common features are not special and so Groups I-II lack unity.